

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Cancelled)
2. (Currently amended) An antibody having binding affinity that is specific to a purified 20 kDa presenilin-2 C-terminal fragment (PS2-CTF), wherein the molecular weight of said PS2-CTF is determined by a polyacrylamide gel electrophoresis/western transfer procedure, and wherein said antibody does not bind presenilin-2.
3. (Previously presented) A method of detecting 20 kDa PS2-CTF, wherein the molecular weight of said PS2-CTF is determined by a polyacrylamide gel electrophoresis/western transfer procedure, in a sample comprising:
 - a) contacting said sample with an antibody according to claim 2, under conditions such that immunocomplexes form, and
 - b) detecting the presence of said antibody bound to said polypeptide.
4. (Previously presented) A diagnostic kit comprising:
 - a) a first container means containing the antibody according to claim 2 and
 - b) a second container means containing a conjugate comprising a binding partner of said antibody and a label.

5. (Previously presented) A hybridoma which produces the antibody according to claim 2.

6-8. (Cancelled)

9. (Previously presented) A method for screening compounds that inhibit proteolytic processing of presenilin 2 in a cell comprising (a) providing a compound to a cell, wherein the cell proteolytically processes presenilin 2, (b) measuring the amount of 20 kDa presenilin 2 C-terminal fragment (PS2-CTF) produced in said cell, and (c) comparing said amount produced to an amount of PS2-CTF produced in a cell not treated with said compound, wherein a decreased amount of 20 kDa presenilin 2 fragment in said cell treated with said compound as compared to a cell not treated with said compound indicates that said compound inhibits proteolytic processing of presenilin 2 in said cell, wherein the molecular weight of said PS2-CTF is determined by a polyacrylamide gel electrophoresis/western transfer procedure.

10. (Previously presented) The method according to claim 9, wherein said amount of 20 kDa presenilin 2 fragment produced in said cell is determined by an ELISA assay using an antibody specific to the 20kDa presenilin 2 fragment.

11-12. (Cancelled)